

Erol Tutumluer

List of Publications by Year in descending order

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241
papers

4,873
citations

109137

35
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143772

57
g-index

256
all docs

256
docs citations

256
times ranked

1808
citing authors

#	ARTICLE	IF	CITATIONS
1	Evaluation of image analysis techniques for quantifying aggregate shape characteristics. Construction and Building Materials, 2007, 21, 978-990.	3.2	219
2	Discrete Element Modeling for fouled railroad ballast. Construction and Building Materials, 2011, 25, 3306-3312.	3.2	167
3	Laboratory Characterization of Fouled Railroad Ballast Behavior. Transportation Research Record, 2009, 2117, 93-101.	1.0	138
4	Quantification of Coarse Aggregate Angularity Based on Image Analysis. Transportation Research Record, 2002, 1787, 117-124.	1.0	126
5	Discrete element modelling of ballasted track deformation behaviour. International Journal of Rail Transportation, 2013, 1, 57-73.	1.8	118
6	Dynamic Analysis of Thin Asphalt Pavements by Using Cross-Anisotropic Stress-Dependent Properties for Granular Layer. Transportation Research Record, 2010, 2154, 156-163.	1.0	106
7	Aggregate Morphology Affecting Strength and Permanent Deformation Behavior of Unbound Aggregate Materials. Journal of Materials in Civil Engineering, 2008, 20, 617-627.	1.3	104
8	Effect of Coarse Aggregate Morphology on Permanent Deformation Behavior of Hot Mix Asphalt. Journal of Transportation Engineering, 2006, 132, 580-589.	0.9	100
9	Geogrid-Aggregate Interlock Mechanism Investigated through Aggregate Imaging-Based Discrete Element Modeling Approach. International Journal of Geomechanics, 2012, 12, 391-398.	1.3	100
10	Nonlinear Pavement Foundation Modeling for Three-Dimensional Finite-Element Analysis of Flexible Pavements. International Journal of Geomechanics, 2009, 9, 195-208.	1.3	91
11	Characterization of geogrid reinforced ballast behavior at different levels of degradation through triaxial shear strength test and discrete element modeling. Geotextiles and Geomembranes, 2015, 43, 393-402.	2.3	88
12	Anisotropic Modeling of Granular Bases in Flexible Pavements. Transportation Research Record, 1997, 1577, 18-26.	1.0	83
13	Backcalculation of full-depth asphalt pavement layer moduli considering nonlinear stress-dependent subgrade behavior. International Journal of Pavement Engineering, 2005, 6, 171-182.	2.2	68
14	Geogrid in Flexible Pavements. Transportation Research Record, 2008, 2045, 102-109.	1.0	67
15	Determination of Volume of Aggregates: New Image-Analysis Approach. Transportation Research Record, 2000, 1721, 73-80.	1.0	64
16	Evaluation of Aggregate Size and Shape by Means of Segmentation Techniques and Aggregate Image Processing Algorithms. Transportation Research Record, 2013, 2335, 50-59.	1.0	64
17	Laboratory Determination of Anisotropic Aggregate Resilient Moduli Using an Innovative Test Device. Transportation Research Record, 1999, 1687, 13-21.	1.0	62
18	Gradation Effects Influencing Mechanical Properties of Aggregate Base-Granular Subbase Materials in Minnesota. Transportation Research Record, 2012, 2267, 14-26.	1.0	61

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19	An integrated approach to dynamic analysis of railroad track transitions behavior. <i>Transportation Geotechnics</i> , 2014, 1, 188-200.	2.0	61
20	Image-Aided Element Shape Generation Method in Discrete-Element Modeling for Railroad Ballast. <i>Journal of Materials in Civil Engineering</i> , 2014, 26, 527-535.	1.3	53
21	Validated Model for Predicting Field Performance of Aggregate Base Courses. <i>Transportation Research Record</i> , 2003, 1837, 41-49.	1.0	52
22	Aggregate Physical Properties Affecting Modulus and Deformation Characteristics of Unsurfaced Pavements. <i>Journal of Materials in Civil Engineering</i> , 2012, 24, 1144-1152.	1.3	52
23	Geogrid Base Reinforcement with Aggregate Interlock and Modeling of Associated Stiffness Enhancement in Mechanistic Pavement Analysis. <i>Transportation Research Record</i> , 2009, 2116, 85-95.	1.0	51
24	Analysing the effect of principal stress rotation on railway track settlement by discrete element method. <i>Geotechnique</i> , 2020, 70, 803-821.	2.2	51
25	Geogrid mechanism in low-volume flexible pavements: accelerated testing of full-scale heavily instrumented pavement sections. <i>International Journal of Pavement Engineering</i> , 2011, 12, 121-135.	2.2	49
26	Automated crack severity level detection and classification for ballastless track slab using deep convolutional neural network. <i>Automation in Construction</i> , 2021, 124, 103484.	4.8	49
27	Micromechanical Particle Interactions in Railway Ballast through DEM Simulations of Direct Shear Tests. <i>International Journal of Geomechanics</i> , 2019, 19, .	1.3	48
28	Evaluation of Aggregate Imaging Techniques for Quantification of Morphological Characteristics. <i>Transportation Research Record</i> , 2013, 2335, 39-49.	1.0	47
29	Characterizing Ballast Degradation through Los Angeles Abrasion Test and Image Analysis. <i>Transportation Research Record</i> , 2014, 2448, 142-151.	1.0	47
30	Degradation-Related Changes in Ballast Gradation and Aggregate Particle Morphology. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2017, 143, .	1.5	46
31	Development of a mechanistic model for geosynthetic-reinforced flexible pavements. <i>Geosynthetics International</i> , 2005, 12, 310-320.	1.5	42
32	Simulating Ballast Shear Strength from Large-Scale Triaxial Tests. <i>Transportation Research Record</i> , 2013, 2374, 126-135.	1.0	42
33	Practices for Unbound Aggregate Pavement Layers. , 2013, , .		42
34	Framework for Development of an Improved Unbound Aggregate Base Rutting Model for Mechanisticâ€“Empirical Pavement Design. <i>Transportation Research Record</i> , 2014, 2401, 11-21.	1.0	40
35	Simulations of large-scale triaxial shear tests on ballast aggregates using sensing mechanism and real-time (SMART) computing. <i>Computers and Geotechnics</i> , 2019, 110, 184-198.	2.3	40
36	Railroad Track Transitions with Multidepth Deflectometers and Strain Gauges. <i>Transportation Research Record</i> , 2014, 2448, 105-114.	1.0	39

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37	Technical and environmental evaluation of metallurgical slags as aggregate for sustainable pavement layer applications. <i>Transportation Geotechnics</i> , 2018, 14, 61-69.	2.0	39
38	Investigation of Aggregate Properties Influencing Railroad Ballast Performance. <i>Transportation Research Record</i> , 2013, 2374, 180-189.	1.0	37
39	Aggregate base residual stresses affecting geogrid reinforced flexible pavement response. <i>International Journal of Pavement Engineering</i> , 2008, 9, 275-285.	2.2	36
40	Image Analysis Technique for Aggregate Morphology Analysis with Two-Dimensional Fourier Transform Method. <i>Transportation Research Record</i> , 2012, 2267, 3-13.	1.0	36
41	Investigation of differential movement at railroad bridge approaches through geotechnical instrumentation. <i>Journal of Zhejiang University: Science A</i> , 2012, 13, 814-824.	1.3	36
42	Anisotropic Modular Ratios as Unbound Aggregate Performance Indicators. <i>Journal of Materials in Civil Engineering</i> , 2002, 14, 409-416.	1.3	34
43	Geogrid-Reinforced Low-Volume Flexible Pavements: Pavement Response and Geogrid Optimal Location. <i>Journal of Transportation Engineering</i> , 2012, 138, 1083-1090.	0.9	34
44	Gradation and Packing Characteristics Affecting Stability of Granular Materials: Aggregate Imaging-Based Discrete Element Modeling Approach. <i>International Journal of Geomechanics</i> , 2017, 17, .	1.3	34
45	Aggregate Morphology Affecting Resilient Behavior of Unbound Granular Materials. <i>Transportation Research Record</i> , 2006, 1952, 12-20.	1.0	33
46	Use of Advanced Aggregate Imaging Systems to Evaluate Aggregate Resistance to Breakage, Abrasion, and Polishing. <i>Transportation Research Record</i> , 2014, 2401, 1-10.	1.0	33
47	Full-Scale Model Testing on Ballasted High-Speed Railway: Dynamic Responses and Accumulated Settlements. <i>Transportation Research Record</i> , 2018, 2672, 125-135.	1.0	31
48	Evaluation of lateral stability of railway tracks due to ballast degradation. <i>Construction and Building Materials</i> , 2021, 278, 122342.	3.2	31
49	Effect of Coarse Aggregate Morphology on the Resilient Modulus of Hot-Mix Asphalt. <i>Transportation Research Record</i> , 2005, 1929, 1-9.	1.0	30
50	Quantifying Effects of Particle Shape and Type and Amount of Fines on Unbound Aggregate Performance through Controlled Gradation. <i>Transportation Research Record</i> , 2010, 2167, 61-71.	1.0	30
51	Performance Evaluations of Unbound Aggregate Permanent Deformation Models for Various Aggregate Physical Properties. <i>Transportation Research Record</i> , 2015, 2525, 20-30.	1.0	30
52	“Critical particle size” and ballast gradation studied by Discrete Element Modeling. <i>Transportation Geotechnics</i> , 2016, 6, 38-44.	2.0	30
53	Aggregate Morphology Affecting Resilient Behavior of Unbound Granular Materials. <i>Transportation Research Record</i> , 2006, 1952, 12-20.	1.0	30
54	Evaluation of Expansive Characteristics of Reclaimed Asphalt Pavement and Virgin Aggregate Used as Base Materials. <i>Transportation Research Record</i> , 2010, 2167, 10-17.	1.0	29

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55	Investigation of Geogrid-Reinforced Railroad Ballast Behavior Using Large-Scale Triaxial Testing and Discrete Element Modeling. Transportation Research Record, 2014, 2462, 98-108.	1.0	29
56	Machine vision based characterization of particle shape and asphalt coating in Reclaimed Asphalt Pavement. Transportation Geotechnics, 2016, 6, 26-37.	2.0	28
57	Characterisation of unbound aggregate materials considering physical and morphological properties. International Journal of Pavement Engineering, 2017, 18, 303-308.	2.2	28
58	Railway Ballast Permeability and Cleaning Considerations. Transportation Research Record, 2017, 2607, 24-32.	1.0	28
59	Aggregate Surface Areas Quantified through Laser Measurements for South African Asphalt Mixtures. Journal of Transportation Engineering, 2012, 138, 1006-1015.	0.9	26
60	Role of Initial Particle Arrangement in Ballast Mechanical Behavior. International Journal of Geomechanics, 2018, 18, .	1.3	26
61	Bender Elements Successfully Quantified Stiffness Enhancement Provided by Geogrid“Aggregate Interlock. Transportation Research Record, 2017, 2656, 31-39.	1.0	25
62	Neural Network Modeling of Anisotropic Aggregate Behavior from Repeated Load Triaxial Tests. Transportation Research Record, 1998, 1615, 86-93.	1.0	24
63	Horizontal stiffness evaluation of geogrid-stabilized aggregate using shear wave transducers. Geotextiles and Geomembranes, 2019, 47, 177-186.	2.3	24
64	Stabilization of a Clayey Soil with Ladle Metallurgy Furnace Slag Fines. Materials, 2020, 13, 4251.	1.3	24
65	Characterization of Railroad Ballast Behavior under Repeated Loading. Transportation Research Record, 2013, 2374, 169-179.	1.0	23
66	Influence of Size and Shape Properties of Railroad Ballast on Aggregate Packing. Transportation Research Record, 2014, 2448, 94-104.	1.0	23
67	Frost depth prediction for seasonal freezing area in Eastern Turkey. Cold Regions Science and Technology, 2016, 124, 118-126.	1.6	22
68	Effects of Ballast Degradation on Permanent Deformation Behavior From Large-Scale Triaxial Tests. , 2014, , .		20
69	Dense-graded aggregate base gradation influencing rutting model predictions. Transportation Geotechnics, 2017, 13, 43-51.	2.0	20
70	Discrete Element Modeling of Full-Scale Ballasted Track Dynamic Responses from an Innovative High-Speed Rail Testing Facility. Transportation Research Record, 2019, 2673, 107-116.	1.0	20
71	Effect of Coarse Aggregate Morphology on the Resilient Modulus of Hot-Mix Asphalt. , 0, .		20
72	Morphological Characterization of Railroad Ballast Degradation Trends in the Field and Laboratory. Transportation Research Record, 2016, 2545, 89-99.	1.0	19

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73	Aggregate Properties Affecting Shear Strength and Permanent Deformation Characteristics of Unbound Base Course Materials. Journal of Materials in Civil Engineering, 2020, 32, .	1.3	19
74	Multiple Wheel Load Interaction in Flexible Pavements. Transportation Research Record, 2008, 2068, 49-60.	1.0	18
75	Falling Weight Deflectometer Testing to Determine Relative Damage in Asphalt Pavement Unbound Aggregate Layers. Transportation Research Record, 2009, 2104, 12-23.	1.0	18
76	Sandwich Model to Evaluate Railroad Asphalt Trackbed Performance under Moving Loads. Transportation Research Record, 2009, 2117, 57-65.	1.0	18
77	Polyurethane Coating of Railroad Ballast Aggregate for Improved Performance. , 2010, , .		18
78	Elastic wave characterization of controlled low-strength material using embedded piezoelectric transducers. Construction and Building Materials, 2016, 127, 210-219.	3.2	18
79	Using Accelerated Pavement Testing to Evaluate Reclaimed Asphalt Pavement Materials for Pavement Unbound Granular Layers. Journal of Materials in Civil Engineering, 2017, 29, .	1.3	18
80	Evaluation of Ballast Behavior under Different Tie Support Conditions using Discrete Element Modeling. Transportation Research Record, 2018, 2672, 106-115.	1.0	18
81	Evaluation of Railway Ballast Permeability Using Machine Vision Based Degradation Analysis. Transportation Research Record, 2018, 2672, 62-73.	1.0	18
82	Validated Mechanistic Model for Geogrid Base Reinforced Flexible Pavements. Journal of Transportation Engineering, 2009, 135, 915-926.	0.9	17
83	Imaging-based direct measurement of aggregate surface area and its application in asphalt mixture design. International Journal of Pavement Engineering, 2010, 11, 415-428.	2.2	17
84	Effect of plasticity index and dust ratio on moisture-density and strength characteristics of aggregates. Transportation Geotechnics, 2016, 9, 69-79.	2.0	17
85	Deformation and Dynamic Load Amplification Trends at Railroad Bridge Approaches. Transportation Research Record, 2017, 2607, 43-53.	1.0	17
86	Understanding track substructure behavior: Field instrumentation data analysis and development of numerical models. Transportation Geotechnics, 2018, 17, 109-121.	2.0	17
87	Triaxial testing and discrete-element modelling of geogrid-stabilised rail ballast. Proceedings of the Institution of Civil Engineers: Ground Improvement, 2018, 171, 223-231.	0.7	17
88	Artificial Neural Networks for Analyzing Concrete Airfield Pavements Serving the Boeing B-777 Aircraft. Transportation Research Record, 1999, 1684, 110-117.	1.0	16
89	Moving load on track with Asphalt trackbed. Vehicle System Dynamics, 2010, 48, 737-749.	2.2	16
90	Validation of a Three-Dimensional Finite Element Model using Airfield Pavement Multiple Wheel Load Responses. Road Materials and Pavement Design, 2010, 11, 387-408.	2.0	16

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91	Geogrid Stabilization of Unbound Aggregates Evaluated Through Bender Element Shear Wave Measurement in Repeated Load Triaxial Testing. Transportation Research Record, 2020, 2674, 113-125.	1.0	16
92	Quantification of Railway Ballast Degradation by Abrasion Testing and Computer-Aided Morphology Analysis. Journal of Materials in Civil Engineering, 2021, 33, .	1.3	16
93	Unbound Aggregate Rutting Models for Stress Rotations and Effects of Moving Wheel Loads. , 0, .		16
94	Field Validation of Airport Pavement Granular Layer Rutting Predictions. Transportation Research Record, 2006, 1952, 48-57.	1.0	15
95	Discrete Element Modeling of Aggregate Behavior in Fouled Railroad Ballast. , 2009, , .		15
96	Monitoring Particle Movement under Compaction using SmartRock Sensor: A Case Study of Granular Base Layer Compaction. Transportation Geotechnics, 2022, 34, 100764.	2.0	15
97	Modulus Anisotropy and Shear Stability of Geofiber-Stabilized Sands. Transportation Research Record, 2004, 1874, 125-135.	1.0	14
98	Unbound Aggregate Rutting Models for Stress Rotations and Effects of Moving Wheel Loads. Transportation Research Record, 2005, 1913, 41-49.	1.0	14
99	Effect of Gradation on Nonlinear Stress-Dependent Behavior of a Sandy Flexible Pavement Subgrade. Journal of Transportation Engineering, 2007, 133, 582-589.	0.9	14
100	Mechanisticâ€“Empirical Evaluation of Aggregate Base and Granular Subbase Quality Affecting Flexible Pavement Performance in Minnesota. Transportation Research Record, 2011, 2227, 97-106.	1.0	14
101	Evaluation of Chemically Stabilized Quarry Byproduct Applications in Base and Subbase Layers through Accelerated Pavement Testing. Transportation Research Record, 2019, 2673, 259-270.	1.0	14
102	Laboratory fatigue performance of under-ballast mats under varying loads and support conditions. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 2019, 233, 606-613.	1.3	14
103	Modeling Nonlinear, Stress-Dependent Pavement Foundation Behavior Using A General-Purpose Finite Element Program. , 2006, , 29.		13
104	Resilient Modulus Behavior Estimated from Aggregate Source Properties. , 2011, , .		13
105	Characterization and Stabilization of Quarry Byproducts for Sustainable Pavement Applications. Transportation Research Record, 2015, 2509, 1-9.	1.0	13
106	Ballast Settlement Ramp to Mitigate Differential Settlement in a Bridge Transition Zone. Transportation Research Record, 2015, 2476, 45-52.	1.0	13
107	Fines inclusion in a crushed limestone unbound aggregate base course material with 25.4-mm maximum particle size. Transportation Geotechnics, 2017, 10, 96-108.	2.0	13
108	Field Validation of Airport Pavement Granular Layer Rutting Predictions. Transportation Research Record, 2006, 1952, 48-57.	1.0	13

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109	Anisotropic Aggregate Base Inputs for Mechanistic Pavement Analysis Considering Effects of Moving Wheel Loads. <i>Journal of Materials in Civil Engineering</i> , 2005, 17, 505-512.	1.3	12
110	Implications of Field Loading Patterns on Different Tie Support Conditions using Discrete Element Modeling: Dynamic Responses. <i>Transportation Research Record</i> , 2019, 2673, 509-520.	1.0	12
111	Automated Segmentation and Morphological Analyses of Stockpile Aggregate Images using Deep Convolutional Neural Networks. <i>Transportation Research Record</i> , 2020, 2674, 285-298.	1.0	12
112	Modeling of elastic anisotropy due to one-dimensional plastic consolidation of clays. <i>Computers and Geotechnics</i> , 1994, 16, 311-349.	2.3	11
113	State of the Art: Anisotropic Characterization of Unbound Aggregate Layers in Flexible Pavements. , 2008, , .		11
114	Investigation and Mitigation of Differential Movement at Railway Transitions for US High Speed Passenger Rail and Joint Passenger/Freight Corridors. , 2012, , .		11
115	Application of the UIUC model for predicting ballast settlement to unsaturated ballasts under moving wheel loads. <i>Transportation Geotechnics</i> , 2019, 18, 149-162.	2.0	11
116	Strength characteristics of crushed gravel and limestone aggregates with up to 12% plastic fines evaluated for pavement base/subbase applications. <i>Transportation Geotechnics</i> , 2019, 18, 25-38.	2.0	11
117	Evaluation of Visual Based Aggregate Shape Classifications Using the University of Illinois Aggregate Image Analyzer (UIAIA). , 2006, , 203.		10
118	A Validated Discrete Element Modeling Approach for Studying Geogrid-Aggregate Reinforcement Mechanisms. , 2011, , .		10
119	Laboratory validation of a gradation design concept for sustainable applications of unbound granular materials in pavement construction. <i>Construction and Building Materials</i> , 2016, 129, 125-139.	3.2	10
120	Influence of Maximum Particle Size, Fines Content, and Dust Ratio on the Behavior of Base and Subbase Coarse Aggregates. <i>Transportation Research Record</i> , 2017, 2655, 20-26.	1.0	10
121	Local stiffness characteristic of geogrid-stabilized aggregate in relation to accumulated permanent deformation behavior. <i>Geotextiles and Geomembranes</i> , 2019, 47, 402-407.	2.3	10
122	Durability Aspects of Chemically Stabilized Quarry By-Product Applications in Pavement Base and Subbase. <i>Transportation Research Record</i> , 2020, 2674, 339-350.	1.0	10
123	Bender Element Field Sensor for the Measurement of Pavement Base and Subbase Stiffness Characteristics. <i>Transportation Research Record</i> , 2021, 2675, 394-407.	1.0	10
124	Advanced full-scale laboratory dynamic load testing of a ballasted high-speed railway track. <i>Transportation Geotechnics</i> , 2021, 29, 100559.	2.0	10
125	Attempt at Resilient Modulus Modeling Using Artificial Neural Networks. , 0, .		10
126	Triaxial testing of new and degraded ballast under dry and wet conditions. <i>Transportation Geotechnics</i> , 2022, 34, 100744.	2.0	10

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127	Performance Evaluation of Uncrushed Aggregates in Unsurfaced Road Applications through Accelerated Pavement Testing. Transportation Research Record, 2012, 2282, 67-78.	1.0	9
128	A Smartphone-Based Image Analysis Technique for Ballast Aggregates. , 2016, , .		9
129	Crushed Limestone Aggregate Strength Influenced by Gradation, Fines Content, and Dust Ratio. Journal of Transportation Engineering Part B: Pavements, 2018, 144, .	0.8	9
130	Rutting prediction in airport pavement granular base/subbase: A stress history based approach. Transportation Geotechnics, 2016, 9, 139-160.	2.0	8
131	Pavement Working Platforms Constructed with Large-Size Unconventional Aggregates. Transportation Research Record, 2016, 2578, 1-11.	1.0	8
132	Cement-Treated Bases Containing Reclaimed Asphalt Pavement, Quarry By-Products, and Fibers. Transportation Research Record, 2016, 2580, 10-17.	1.0	8
133	Spatial variability of compacted aggregate bases. Transportation Geotechnics, 2018, 17, 56-65.	2.0	8
134	Spatial Verification of Modulus for Pavement Foundation System. Transportation Research Record, 2018, 2672, 333-346.	1.0	8
135	Stone blowing as a remedial measure to mitigate differential movement problems at railroad bridge approaches. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 2019, 233, 63-72.	1.3	8
136	Use of a 3D Structured-Light Scanner to Determine Volume, Surface Area, and Shape of Aggregates. Journal of Materials in Civil Engineering, 2021, 33, .	1.3	8
137	Attempt at Resilient Modulus Modeling Using Artificial Neural Networks. Transportation Research Record, 1996, 1540, 1-6.	1.0	7
138	Effectiveness of Geogrid Base-Reinforcement in Low-Volume Flexible Pavements. , 2008, , .		7
139	Gradation Effects on the Strength Properties of Cement and Fly Ash Stabilized Quarry By-Products. , 2016, , .		7
140	Results of Soaked and Unsoaked California Bearing Rate Tests on Unbound Aggregates with Varying Amounts of Fines and Dust Ratios. Transportation Research Record, 2017, 2655, 13-19.	1.0	7
141	Embedded shear wave transducer for estimating stress and modulus of As-constructed unbound aggregate base layer. Construction and Building Materials, 2018, 183, 465-471.	3.2	7
142	Properties of aggregate fines influencing modulus and deformation behaviour of unbound aggregates. International Journal of Pavement Engineering, 2021, 22, 498-513.	2.2	7
143	Stiffness evaluation of compacted geo-materials using crosshole-type dynamic cone penetrometer (CDP), rPLT, and LFWD. Construction and Building Materials, 2021, 303, 124015.	3.2	7
144	Characterizing Resilient Behavior of Naturally Occurring Bituminous Sands for Road Construction. Journal of Materials in Civil Engineering, 2010, 22, 1085-1092.	1.3	6

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145	Microstructural Mechanisms of Early Age Cracking Behavior of Concrete: Fracture Energy Approach. Journal of Engineering Mechanics - ASCE, 2011, 137, 439-446.	1.6	6
146	Moisture Effects on Degraded Ballast Shear Strength Behavior. , 2016, , .		6
147	Implementation framework of the UIUC aggregate base rutting model. International Journal of Pavement Engineering, 2021, 22, 1305-1317.	2.2	6
148	Railway ballast anisotropy testing via true triaxial apparatus. Transportation Geotechnics, 2020, 23, 100355.	2.0	6
149	Airport Pavement Stiffness Monitoring and Assessment of Mechanical Stabilization using Bender Element Field Sensor. Transportation Research Record, 2022, 2676, 542-553.	1.0	6
150	Neural Network Algorithms for the Correction of Concrete Slab Stresses from Linear Elastic Layered Programs. Transportation Research Record, 1997, 1568, 44-51.	1.0	5
151	Wander Patterns for Commercial Aircraft at Denver International Airport. , 2001, , 158.		5
152	Effect of Aircraft Load Wander on Unbound Aggregate Pavement Layer Stiffness and Deformation Behavior. , 2008, , .		5
153	Overlay Thickness Design for Low-Volume Roads. Transportation Research Record, 2015, 2509, 46-56.	1.0	5
154	A Framework to Utilize Shear Strength Properties for Evaluating Rutting Potentials of Unbound Aggregate Materials. Procedia Engineering, 2016, 143, 911-920.	1.2	5
155	Framework to Improve the Pavement ME Design Unbound Aggregate Rutting Model by Using Field Data. Transportation Research Record, 2016, 2591, 57-69.	1.0	5
156	Support Condition and Traffic Loading Patterns Influencing Laboratory Determination of Under Ballast Mat Bedding Modulus and Insertion Loss. Transportation Research Record, 2018, 2672, 74-84.	1.0	5
157	Field Imaging and Volumetric Reconstruction of Riprap Rock and Large-Sized Aggregates: Algorithms and Application. Transportation Research Record, 2019, 2673, 575-589.	1.0	5
158	Shear strength properties of naturally occurring bituminous sands. , 2009, , .		5
159	Near Geogrid Stiffness Quantification in Airport Pavement Base Layers Using Bender Element Field Sensor. Lecture Notes in Civil Engineering, 2022, , 703-715.	0.3	5
160	Effect of Ballast Degradation on Track Dynamic Behavior Using Discrete Element Modeling. Transportation Research Record, 2022, 2676, 452-462.	1.0	5
161	Granular Material Radial Deformation Measurements with a Circumferential Extensometer in Repeated Load Triaxial Testing. Transportation Research Record, 1998, 1614, 61-69.	1.0	4
162	Advanced Characterization of Granular Materials for Mechanistic Based Pavement Design. , 2000, , 51.		4

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163	Permanent Deformation Behavior of Naturally Occurring Bituminous Sands. Transportation Research Record, 2008, 2059, 31-40.	1.0	4
164	Laboratory Validation of Coal Dust Fouled Ballast Discrete Element Model. , 2010, , .		4
165	Particle Shape, Type, and Amount of Fines and Moisture Affecting Resilient Modulus Behavior of Unbound Aggregates. , 2010, , .		4
166	Sustainable Alternatives in Low Volume Road Base Course Applications Evaluated through Accelerated Pavement Testing. , 2015, , .		4
167	Optimizing Stability and Stiffness Through Aggregate Base Gradation. Transportation Research Record, 2016, 2578, 12-20.	1.0	4
168	Effectiveness of Chemical Grouting and Stone Blowing as Remedial Measures to Mitigate Differential Movement at Railroad Track Transitions. , 2016, , .		4
169	Performance Checks for Unbound Aggregate Base Permanent Deformation Prediction Models under Dynamic Stress States Induced by Moving Wheel Loading. Procedia Engineering, 2016, 143, 979-990.	1.2	4
170	Effect of Dust Ratios on the Strength of Aggregates with Low Plasticity Fines. , 2016, , .		4
171	Evaluating Constructed Aggregate Layers of Working Platforms and Flexible Pavements: Adequacy of In-Place Quality Control and Quality Assurance Techniques. Transportation Research Record, 2017, 2655, 1-12.	1.0	4
172	Airfield Pavement Damage Evaluation Due to New-Generation Aircraft Wheel Loading and Wander Patterns. Transportation Research Record, 2018, 2672, 82-92.	1.0	4
173	Railway Ballast Strength and Permeability Affecting Track Performance Under Dry and Wet Conditions. , 2018, , .		4
174	A Roadmap for Sustainable Smart Trackâ€™ Wireless Continuous Monitoring of Railway Track Condition. Sustainability, 2021, 13, 7456.	1.6	4
175	Analysis of Temperature Effects on Pavement Response at Denver International Airport. , 2000, , 125.		3
176	Stress Path Testing for Proper Characterization of Unbound Aggregate Base Behavior. Transportation Research Record, 2001, 1757, 92-99.	1.0	3
177	Rutting of Airport Pavement Granular Layers. , 2004, , 334.		3
178	In-Situ Hydraulic Properties of Unbound Aggregate Layers Measured Using Gas Permeameter Test (GPT) Device. , 2013, , .		3
179	Seismic Testing for Track Substructure (Ballast and Subgrade) Assessment for Passenger/Freight Corridors. , 2013, , .		3
180	DEM Approach for Engineering Aggregate Gradation and Shape Properties Influencing Mechanical Behavior of Unbound Aggregate Materials. , 2014, , .		3

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